

NEOPOMACENTRUS MIRYAE, A NEW SPECIES OF
POMACENTRID FISH FROM THE RED SEA

M. Dor and Gerald R. Allen

It has come to our attention that one of the commonest pomacentrids in the Gulf of Aqaba, northern Red Sea is undescribed. The species is well known and usually referred to as *Abudefduf azysron* (Bleeker). However, in a monographic review of the Pomacentridae currently in progress, the junior author finds that *azysron* (now included in *Neopomacentrus*) is confined primarily to the Malaysian-Indonesian Archipelago and adjacent areas.

In most recent classifications, *Neopomacentrus miryae* would be placed in the genus *Abudefduf* on the basis of the smooth preopercle margin and single row of teeth in the upper and lower jaws. Allen (1975) pointed out that the previous classification of the Pomacentridae has been grossly oversimplified, particularly concerning *Abudefduf* and *Pomacentrus*. These two groups are separable into at least 13 genera, including *Neopomacentrus* Allen (1975). The latter genus is characterized by the following combination of features: body relatively elongate, depth usually 2.3-2.8 in standard length; scales large, about 27-29 in a median lateral series; edge of preopercle smooth to moderately serrate; margin of suborbital usually smooth to weakly serrate or hidden by scales; teeth at front of jaws biserial in most species; dorsal rays XIII, 10-13; middle rays of soft dorsal and anal fins, and outer rays of caudal fin frequently produced into elongate filaments.

Measurements were made with dial calipers to the nearest one-tenth millimeter. Standard length is abbreviated as SL. Counts and proportions appearing in parentheses in the description section apply to the paratypes if differing from the holotype.

Type-specimens have been deposited at the following institutions: Bernice P. Bishop Museum, Honolulu (BPBM); British Museum (Natural History), London (BMNH); Hebrew University, Jerusalem (HUJ); Museum National d'Histoire Naturelle, Paris (MNHN); Tel Aviv University, Israel (TAU); National Museum of Natural History, Washington (USNM); Western Australian Museum, Perth (WAM).

Neopomacentrus miryae, new species

Fig. 1; Tables 1, 2

Holotype.—BPBM 20322, 76.1 mm SL, collected with spear and quinaldine in 10 m at Dahab, Sinai Peninsula, Gulf of Aqaba, Red Sea by J. Randall, 22 September 1974.

Paratypes.—BPBM 14327, 75.5 mm SL, collected at Elat, Gulf of Aqaba, Red Sea by H. Fricke, December 1972; BPBM 14666, 79.0 mm, same data as BPBM 14327 except collected 8 November 1972; BPBM 18208 (2 specimens, 63.4 and 79.3 mm SL), collected with the holotype; BMNH 1976-5.4.1-2 (2, 42.3 and 56.7), collected with spear in 15 m at Elat, Red Sea by G. Allen, 24 November 1975; HJ 4825 (3, 38.0-86.0), collected with rotenone near Elat, Red Sea by E. Clarke, 22 July 1968; MNHN 1976-8, 64.5 mm, collected at Elat, Red Sea by H. Fricke, 8 November 1972; TAU 3225 (11, 58.0-83.6), collected at Elat, Red Sea with net by L. Fishelson, January, 1969; USNM 215463 (2, 82.2 and 86.0), collected at Elat, Red Sea, 2 October 1965 (collector unknown); USNM 216432 (31, 21.0-76.0), collected with rotenone in 3-12 m just north of Ras Burqa, Gulf of Aqaba, Red Sea by V. Springer, 23 July 1969; WAM P25523-002, 45.0 mm, collected in 15 m at Elat, Red Sea by G. Allen, 24 November 1975.

Diagnosis.—A species of *Neopomacentrus* with the following combination of characters: dorsal rays XIII,11-13; anal rays II,11; pectoral rays 19; tubed lateral line scales 17; gill rakers on first arch 27-30; edge of suborbital hidden by scales; caudal fin pale without dark markings; in life a prominent white spot just behind posteriormost dorsal rays.

Description.—Dorsal rays XIII,12 (XIII,11-13); anal rays II,11; pectoral rays 19 (18-19); branched caudal rays 13; gill rakers on first branchial arch $8 + 20 = 28$ (7-9 + 19-21); branchiostegal rays 6; lateral line scales with tubes 17 (17-19); vertical scale rows from upper edge of gill opening to caudal base 29 (28-29); scales above lateral line to middle of spinous dorsal fin $1\frac{1}{2}$; scales below lateral line to origin of anal fin 9 (9-10); circumpeduncular scales 16 (15-16).

Body relatively elongate, depth 2.6 (2.2-2.6) in standard length, compressed, width 2.3 (2.3-2.7) in depth; head length 3.6 (3.2-3.7) in standard length; snout 4.5 (4.0-4.5) in head; eye 3.4 (3.2-3.8) in head; width of bony orbit 3.3 (2.9-3.5) in head; interorbital space moderately convex, bony width slightly less than eye diameter; least depth of caudal peduncle 2.2 (2.1-2.5) in head; length of caudal peduncle 1.9 (2.0-2.4) in head.

Mouth oblique, terminal, maxillary ending slightly posterior to a vertical through anterior edge of eye; teeth of jaws incisiform, uniserial; upper jaw with 42 (38-42) teeth, largest about equal to diameter of nostril in height; lower jaw with 36 (34-36) teeth, largest slightly smaller than upper teeth; single nasal opening on each side of snout; nostril with a very low fleshy rim; margin of preorbital entire; suborbital margin mostly hidden by scales, free only anteriorly; margin of preopercle entire; opercle margins entire except a single flattened spine on upper portion.

Scales finely ctenoid; preorbital, snout tip, lips, chin, and isthmus naked; remainder of head and body scaled; suborbital with a single row of scales; three parallel rows of scales below this to lower margin of pre-



Fig. 1. *Neopomacentrus minyae*, holotype, 76.1 mm SL, Dahab, Red Sea (photo by J. E. Randall).

Table 1. Morphometric proportions of type-specimens of *Neopomacentrus miriæ* (in thousandths of standard length).

Character	BPBM 20322 Holotype	USNM 215463 Paratype	BPBM 14666 Paratype	MNHN 1976-8 Paratype	BMNH 1976.5.4.1-2 Paratype	WAM p25523-002 Paratype
Standard length (mm)	76.1	86.0	79.0	64.5	56.7	45.0
Greatest depth of body	385	388	456	416	436	391
Greatest width of body	171	165	203	175	159	160
Head length	281	273	299	295	298	311
Snout length	63	65	75	71	69	69
Diameter of bony orbit	85	81	86	93	99	107
Width of bony interorbital	72	73	90	84	78	80
Least depth of caudal peduncle	126	128	144	130	136	127
Length of caudal peduncle	145	134	139	144	132	131
Snout to origin of dorsal fin	335	323	367	361	353	356
Snout to origin of anal fin	641	642	658	657	629	646
Snout to origin of pelvic fin	375	360	418	392	376	444
Length of dorsal fin base	576	558	582	584	605	556
Length of anal fin base	219	221	243	240	229	211
Length of pectoral fin	263	263	291	304	300	309
Length of pelvic fin	210	221	262	268	243	289
Length of pelvic spine	131	128	148	144	145	178
Length of 1st dorsal spine	68	62	41	76	56	84
Length of 2nd dorsal spine	63*	91	89	95	92	67*
Length of longest dorsal spine	125	128	142	135	131	144
Length of 1st anal spine	66	62	71	71	71	76
Length of 2nd anal spine	155	137	167	158	155	156
Length of longest anal ray	171	227	210	212	185	200
Length of caudal fin	319	297	380	406	377	422

* Damaged.

opercle; dorsal and anal fins with a basal scaly sheath; caudal fin scaled nearly $\frac{3}{4}$ distance to end of lobes; paired fins scaled only basally; axillary scale of pelvic fins about $\frac{1}{2}$ length of pelvic spine.

Tubes of lateral line ending below anterior rays of soft portion of dorsal fin; 4 (1–4) pored scales posterior to tubed scales; a series of 9 (7–9) pored scales mid-laterally on caudal peduncle to caudal base.

Origin of dorsal fin at level of fourth tubed scale of lateral line; spines of dorsal fin gradually increasing in length to last spine (or middle spines in specimens under about 50 mm SL); membrane between anterior spines moderately incised, that between posterior spines only slightly incised; longest dorsal spine 2.3 (2.0–2.2) in head; first dorsal spine 1.2–1.6 in second spine (damaged in holotype); second dorsal spine 1.4–1.6 in longest dorsal spine; longest (6th) soft dorsal ray 1.5 (1.2–1.6) in head; length of base of dorsal fin 1.7 (1.7–1.8) in standard length; first anal spine about equal to first dorsal spine, its length 2.4 (2.2–3.0) in second spine; second anal spine 1.8 (1.8–2.0) in head; longest (7th) soft anal ray 1.6 (1.2–1.6) in head; base of anal fin 2.6 (2.4–2.6) in base of dorsal fin; caudal fin forked, its length 3.1 (2.6–3.4) in standard length; pectoral fin relatively short, not reaching a vertical through origin of anal fin in adults, longest ray 3.5 (3.2–3.8) in standard length; pelvic fin of adult usually not reaching origin of anal fin, longest ray 4.8 (3.5–4.5) in standard length.

Color in 70% ethanol.—Holotype head and body brown, grading to tan ventrally; dark brown spot smaller than pupil size at uppermost portion of pectoral base, scarcely invading axil; median fins tan to slightly dusky; narrow black margin on dorsal fin; paired fins whitish.

Paratypes similar in color except dark spot on base of right pectoral fin of largest USNM specimen expanded, forming a narrow bar on fin base.

Color in life.—Based on a 35 mm transparency taken by the junior author in 15 m at Elat. Head and body mostly olive green with dusky patch on each scale giving overall reticulated appearance; snout suffused with yellow; upper half of caudal peduncle and outer margins of lobes of caudal fin yellow-orange; prominent white spot, smaller than pupil, just behind posteriormost dorsal ray; dorsal fin grayish-green with narrow black margin; anal and pelvic fins whitish; pectoral fins transparent with small black spot on upper edge of fin base.

Remarks.—This species appears to have no close relatives. It is the only species of *Neopomacentrus* lacking an inner row of slender buttress teeth at the front of the jaws.

N. miryae is extremely abundant in the Gulf of Aqaba. Perhaps it is the most common pomacentrid found there. The ecology of this species was discussed by Fishelson et al. (1974) who incorrectly referred to it as *Abudefduf azysron* (Bleeker). Although *azysron* is a distinct species of *Neopomacentrus*, it does not occur in the Red Sea; its main distribution is

Table 2. Frequency distribution for selected counts of types of *Neopomacentrus miryae*.

Soft dorsal rays			Pectoral rays	
11	12	13	18	19
3	21	1	8	16

Lateral-line tubes			Gill rakers					
			upper			lower		
17	18	19	7	8	9	19	20	21
14	9	1	1	18	5	6	3	5

in the Malaysian-Indonesian Archipelago and adjacent regions (Allen, 1975). Baschieri-Salvadori (1957) was the first to use this name for a Red Sea pomacentrid, however, the fish which he called *azysron* was not *N. miryae*, but a second member of the genus, inhabiting the southern Red Sea. It will be described in a review of Red Sea pomacentrids currently in preparation by the junior author and J. E. Randall.

We have named the new species *miryae* in honor of the senior author's late wife.

Acknowledgments

We would like to express our gratitude to Mr. David Fridman, Manager of Coral World, and Dr. Ilan Paperna, Director of the Hebrew University Marine Laboratory for providing facilities during the junior author's visit to Elat during November 1975. Thanks are also due to Dr. J. E. Randall for sending specimens and a photograph of the type of *N. miryae*.

Literature Cited

- Allen, G. R. 1975. Damselfishes of the South Seas. T. F. H. Publications, Inc., Neptune, New Jersey. 240 pp.
- Baschieri-Salvadori, F. 1957. Spedizione subacqua Italiani nel Mar Rosso Ricerche Zoologiche. Ix. Pomacentridi. Riv. Biol. Colon. 15:57-68.
- Fishelson, L., D. Popper, and A. Avidor. 1974. Biosociology and ecology of pomacentrid fishes around the Sinai Peninsula (northern Red Sea). Jour. Fish. Biol. 6:119-133.

College of Kibbutz Education, Tel Aviv, Israel, and Western Australian Museum, Perth, Australia.